```
DDDDDDDDDDDD        CCCCCCCCCCCC  LLL
DDDDDDDDDDDD        CCCCCCCCCCCC  LLL
DDDDDDDDDDDD        CCCCCCCCCCCC  LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDD         DDD  CCC              LLL
DDDDDDDDDDDD        CCCCCCCCCCCC  LLLLLLLLLLLLLLL
DDDDDDDDDDDD        CCCCCCCCCCCC  LLLLLLLLLLLLLLL
DDDDDDDDDDDD        CCCCCCCCCCCC  LLLLLLLLLLLLLLL
```

```
**FILE**ID**DCLPARSE







DDDDDDDD      CCCCCCCC  LL          PPPPPPPP      AAAAAA    RRRRRRRR      SSSSSSSS  EEEEEEEEEE
DDDDDDDD      CCCCCCCC  LL          PPPPPPPP      AAAAAA    RRRRRRRR      SSSSSSSS  EEEEEEEEEE
DD      DD  CC          LL          PP      PP  AA      AA  RR      RR  SS          EE
DD      DD  CC          LL          PP      PP  AA      AA  RR      RR  SS          EE
DD      DD  CC          LL          PP      PP  AA      AA  RR      RR  SS          EE
DD      DD  CC          LL          PP      PP  AA      AA  RR      RR  SS          EE
DD      DD  CC          LL          PPPPPPPP    AA      AA  RRRRRRRR      SSSSSS    EEEEEEEE
DD      DD  CC          LL          PPPPPPPP    AA      AA  RRRRRRRR      SSSSSS    EEEEEEEE
DD      DD  CC          LL          PP          AAAAAAAAAA  RR  RR              SS  EE
DD      DD  CC          LL          PP          AAAAAAAAAA  RR  RR              SS  EE
DD      DD  CC          LL          PP          AA      AA  RR    RR            SS  EE              ....
DD      DD  CC          LL          PP          AA      AA  RR    RR            SS  EE              ....
DDDDDDDD      CCCCCCCC  LLLLLLLLLL  PP          AA      AA  RR      RR  SSSSSSSS    EEEEEEEEEE      ....
DDDDDDDD      CCCCCCCC  LLLLLLLLLL  PP          AA      AA  RR      RR  SSSSSSSS    EEEEEEEEEE      ....

LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

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     (2)        109         PARSE A DCL COMMAND
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```

```
0000          .TITLE  DCLPARSE - PARSE A DCL COMMAND
0000          .IDENT  'V04-000'
0000
0000    ;
0000    ;****************************************************************************
0000    ;*                                                                          *
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0000    ;*                                                                          *
0000    ;*                                                                          *
0000    ;****************************************************************************
0000    ;
0000    ; AUTHOR: TIM HALVORSEN, NOV 1980
0000    ;
0000    ; MODIFIED BY:
0000    ;
0000    ;       V03-014 HWS0083         Harold Schultz  19-Jul-1984
0000    ;               Fix building of error message frame for LIB$SIGNAL.
0000    ;               In the event of a buffer overflow, signal CLI$_BUFOVF
0000    ;               instead of SS$_BUFFEROVF
0000    ;
0000    ;       V03-013 PCG0019         Peter George    08-Dec-1983
0000    ;               Fix bug in error message routine.
0000    ;
0000    ;       V03-012 PCG0018         Peter George    27-Jul-1983
0000    ;               Fill in WRK_L_SIGNALRTN.
0000    ;
0000    ;       V03-011 PCG0017         Peter George    15-Jun-1983
0000    ;               Return, do not signal, NOCOMD status.
0000    ;               Remove special code for negative statuses.
0000    ;
0000    ;       V03-010 PCG0016         Peter George    20-Apr-1983
0000    ;               Include command segment when signalling syntax errors.
0000    ;               Clear WRK_B_PARMSUM.
0000    ;
0000    ;       V03-009 PCG0015         Peter George    15-Feb-1983
0000    ;               Update to new structure level.
0000    ;
0000    ;       V03-008 PCG0014         Peter George    08-Jan-1983
0000    ;               Change .ASCID default prompt to .ASCIC.
0000    ;
0000    ;       V03-007 PCG0013         Peter George    27-Dec-1982
```

```
                                  0000     ;               Fix accvio in referencing command descriptor.
                                  0000     ;
                                  0000     ;       V03-006 PCG0012         Peter George    14-Dec-1982
                                  0000     ;               For compatibility, partially back off PCG0011.
                                  0000     ;
                                  0000     ;       V03-005 PCG0011         Peter George    02-Dec-1982
                                  0000     ;               Command string is passed in by descriptor,
                                  0000     ;               rather than address of descriptor.
                                  0000     ;
                                  0000     ;       V03-004 PCG0010         Peter George    16-Nov-1982
                                  0000     ;               Get prompt string descriptor from INT instead
                                  0000     ;               of just the address of the descriptor.
                                  0000     ;               Use WRK_G_INPUF instead of WRK_G_DCLPRSBUF.
                                  0000     ;
                                  0000     ;       V03-003 PCG0009         Peter George    15-Nov-1982
                                  0000     ;               Use STRTOOLNG instead of PMPTOOLNG.
                                  0000     ;
                                  0000     ;       V03-002 PCG0008         Peter George    15-Oct-1982
                                  0000     ;               Get the PROBEs right this time.
                                  0000     ;               Accept a prompt string as another argument.
                                  0000     ;               Prompt for a command line if none is supplied.
                                  0000     ;
                                  0000     ;       V03-001 PCG0007         Peter George    15-Jul-1982
                                  0000     ;               Add keyword parsing support.
                                  0000     ;               Use INT data structure.
                                  0000     ;               Add support for prompt and continuation routines.
                                  0000     ;               Correct sense of branches after PROBEs.
                                  0000     ;               Remove unneccessary macro library calls.
                                  0000     ;
                                  0000     ;--
                                  0000
                                  0000     ;
                                  0000     ; MACRO LIBRARY CALLS
                                  0000     ;
                                  0000
                                  0000             $$CLITABDEF                             ; DEFINE TABLE STRUCTURES
                                  0000             $$INTDEF                                ; DEFINE INTERFACE FORMAT
                                  0000             DCLDEF                                  ; DEFINE CLINT OWN STORAGE AREA
                                  0000             WRKDEF                                  ; DEFINE COMMAND WORK AREA
                                  0000             $SSDEF                                  ; DEFINE SYSTEM MESSAGES
                                  0000             $CLIMSGDEF                              ; DEFINE ERROR/STATUS VALUES
                                  0000             $STSDEF                                 ; DEFINE STATUS CODE FIELDS
                                  0000             $PSLDEF                                 ; DEFINE PROCESSOR STATUS FIELDS
                                  0000
                       0000001A   0000     CTRLZ   = 26                                    ; CONTROL/Z CHARACTER
                                  0000
                              00000000             .PSECT  DCL$ZCODE,BYTE,RD,NOWRT
                                  0000
                                  0000     DEFAULT_PROMPT:
   20 3E 44 4E 41 4D 4D 4F 43 00' 0000             .ASCIC  /COMMAND> /
                              09  0000
```

```
                        000A            .SBTTL  PARSE A DCL COMMAND
                        000A    ;+
                        000A    ; DCL$DCLPARSE - PARSE A DCL COMMAND STRING
                        000A    ;
                        000A    ; THIS ROUTINE PARSES A DCL COMMAND STRING GIVEN THE ADDRESS OF THE COMMAND
                        000A    ; TABLES WHICH DESCRIBE THE SYNTAX OF THE COMMAND SET.
                        000A    ;
                        000A    ; INPUTS:
                        000A    ;
                        000A    ;       4(AP) = ADDRESS OF REQUEST DESCRIPTOR
                        000A    ;
                        000A    ; OUTPUTS:
                        000A    ;
                        000A    ;       NONE
                        000A    ;-
                        000A
                  0FFC  000A            .ENTRY  DCL$DCLPARSE,-
                        000C                    ^M<R2,R3,R4,R5,R6,R7,R8,R9,R10,R11>
                        000C
52   00000000'GF    DE  000C            MOVAL   G^CTL$GL_DCLPRSOWN,R2   ;GET ADDRESS OF WRK POINTER
      5B   04 AC    D0  0013            MOVL    4(AP),R11               ;GET ADDRESS OF REQUEST DESCRIPTOR
                        0017
                        0017    ;
                        0017    ; IF NO COMMAND STRING IS SPECIFIED, AND WE ARE NOT PROMPTING, THEN
                        0017    ; CAUSE ALL SUBSEQUENT INTERFACE REQUESTS TO REFER TO THE ALREADY PARSED
                        0017    ; ORIGINAL COMMAND LINE.
                        0017    ;
           0C AB    D5  0017            TSTL    INT_L_ENTADDR(R11)      ;COMMAND STRING SPECIFIED?
              0E    12  001A            BNEQ    20$                     ;YES, THEN BRANCH
      50   18 AB    D0  001C            MOVL    INT_L_LIST(R11),R0      ;ROUTINE LIST SPECIFIED?
              05    13  0020            BEQL    10$                     ;NO, THEN BRANCH
           08 A0    D5  0022            TSTL    INT_L_CONTINRTN(R0)     ;CONTINUATION ROUTINE SPECIFIED?
              03    12  0025            BNEQ    20$                     ;YES, THEN BRANCH
            01A3    31  0027    10$:    BRW     RESTORE_SUPER_MODE      ;NO, RESTORE THE SUPERVISOR MODE COMMAND
                        002A
                        002A    ;
                        002A    ; VALIDATE THE TABLE STRUCTURE.  IF OLD, SUPPORTED VERSION, THEN UPGRADE THEM
                        002A    ; BEHIND THE USER'S BACK.
                        002A    ;
           14 AB    DD  002A    20$:    PUSHL   INT_L_FREEVM(R11)       ;PUSH ADDR OF LIB$FREE_VM ROUTINE
           10 AB    DD  002D            PUSHL   INT_L_GETVM(R11)        ;PUSH ADDR OF LIB$GET_VM ROUTINE
           04 AB    9F  0030            PUSHAB  INT_L_TABLES(R11)       ;PUSH PLACE TO RETURN CONVERTED ADDRESS
           04 AB    DD  0033            PUSHL   INT_L_TABLES(R11)       ;PUSH ADDRESS OF TABLES
00000000'GF   04    FB  0036            CALLS   #4,G^CDU$UPGRADE_TABLE  ;VALIDATE AND POSSIBLY CONVERT TABLES
           21 50    E9  003D            BLBC    R0,35$                  ;SIGNAL ERROR AND EXIT
                        0040
                        0040    ;
                        0040    ; IF NO USER MODE WRK BLOCK HAS BEEN ALLOCATED BEFORE, THEN ALLOCATE
                        0040    ; AND INITIALIZE ONE NOW.
                        0040    ;
      5A      62    D0  0040            MOVL    (R2),R10                ;WRK BLOCK ALLOCATED?
              0A    13  0043            BEQL    30$                     ;NO, THEN BRANCH
              03    0D  0045            PROBEW  #PSL$C_USER,-           ;USER WRITABLE?
         0B7A 8F        0047                    #-WRK_K_LENGTH,-        ;
         F486 CA        004A                    WRK_K_LENGTH(R10)       ;
              20    12  004D            BNEQ    50$                     ;YES, THEN BRANCH
                        004F
```

```
                              004F   166 ;
                              004F   167 ; ALLOCATE USER MODE WRK BLOCK
                              004F   168 ;
        00000B7A 8F     DD    004F   169 30$:        PUSHL   #-WRK_K_LENGTH              ;LENGTH TO ALLOCATE
                 5E     DD    0055   170             PUSHL   SP                          ;PLACE TO RETURN ADDRESS
              04 AE     DF    0057   171             PUSHAL  4(SP)                       ;ADDRESS OF LONGWORD CONTAINING LENGTH
        10 BB    02     FB    005A   172             CALLS   #2,@INT_L_GETVM(R11)        ;ALLOCATE DYNAMIC MEMORY
              03 50     E8    005E   173             BLBS    R0,40$                      ;BRANCH IF SUCCESS
               010D     31    0061   174 35$:        BRW     EXIT                        ;EXIT IF ERROR
    00000B7A 8F  8E     C1    0064   175 40$:        ADDL3   (SP)+,#-WRK_K_LENGTH,-      ;COMPUTE ENDING ADDRESS WRK BLOCK
                 62           006B   176                     (R2)                        ;
           5A    62     D0    006C   177             MOVL    (R2),R10                    ;GET ADDRESS OF WRK BLOCK
                              006F   178
                              006F   179 ;
                              006F   180 ; IF CLINT OWN STORAGE IS ALLOCATED, THEN FREE IT SO THAT SUBSEQUENT
                              006F   181 ; INTERFACE REQUESTS CAUSE THE OWN STORAGE TO BE REINITIALIZED.
                              006F   182 ;
  52    00000000'GF     DE    006F   183 50$:        MOVAL   G^CTL$GL_CLINTOWN,R2        ;GET ADDRESS OF CLINT OWN POINTER
                 62     D5    0076   184             TSTL    (R2)                        ;CLINT OWN STORAGE ALLOCATED?
                 03     13    0078   185             BEQL    60$                         ;NO, THEN BRANCH
               018D     30    007A   186             BSBW    DEALLOC_OWN                 ;DEALLOCATE OWN STORAGE
                              007D   187
                              007D   188 ;
                              007D   189 ; FILL IN WRK BLOCK FIELDS
                              007D   190 ;
            F492 CA     9E    007D   191 60$:        MOVAB   WRK_G_BUFFER(R10),-         ;SET ADDRESS OF EXPANSION BUFFER
            F486 CA           0081   192                     WRK_L_EXPANDPTR(R10)        ;
            F9B6 CA     9E    0084   193             MOVAB   WRK_G_RESULT(R10),-         ;SET ADDRESS OF RESULT PARSE TABLE
              BA AA           0088   194                     WRK_L_RSLNXT(R10)           ;
              F0 AA     B4    008A   195             CLRW    WRK_W_FLAGS(R10)            ;RESET COMMAND FLAGS
            2000 8F     A8    008D   196             BISW    #WRK_M_USRMODE,-            ;SET USER MODE PARSE FLAG
              F0 AA           0091   197                     WRK_W_FLAGS(R10)            ;
              C4 AA     94    0093   198             CLRB    WRK_B_VALLEV(R10)           ;RESET VALUE LEVEL
              CE AA     94    0096   199             CLRB    WRK_B_PARMCNT(R10)          ;RESET PARAMETER COUNT
              CF AA     94    0099   200             CLRB    WRK_B_PARMSUM(R10)          ;RESET PARAMETER TOTAL
            F9AA CA     D4    009C   201             CLRL    WRK_L_READRTN(R10)          ;ASSUME NO CONTINUATION ROUTINE
            F9A6 CA     D4    00A0   202             CLRL    WRK_L_PROMPTRTN(R10)        ;ASSUME NO PROMPT ROUTINE
            F99E CA     7C    00A4   203             CLRQ    WRK_W_PMPTLEN(R10)          ;ASSUME NO PROMPT STRING
            F9B2 CA     D4    00A8   204             CLRL    WRK_L_SPECRTN(R10)          ;NO SPECIAL CHARACTER PROCESSING
        00000177'EF     9E    00AC   205             MOVAB   ERROR,-                     ;SET ADDRESS OF ERROR HANDLER
            F9AE CA           00B2   206                     WRK_L_ERRORRTN(R10)         ;
        00000181'EF     9E    00B5   207             MOVAB   ERRORMSG,-                  ;SET ADDRESS OF ERROR SIGNALER
              D6 AA           00BB   208                     WRK_L_SIGNALRTN(R10)        ;
     50       18 AB     D0    00BD   209             MOVL    INT_L_LIST(R11),R0          ;GET ADDRESS OF ROUTINE LIST
                 4E     13    00C1   210             BEQL    75$                         ;SKIP IF NONE
              08 A0     D0    00C3   211             MOVL    INT_L_CONTINRTN(R0),-       ;GET CONTINUATION ROUTINE
            F9AA CA           00C6   212                     WRK_L_READRTN(R10)          ;
              04 A0     D0    00C9   213             MOVL    INT_L_PROMPTRTN(R0),-       ;GET PROMPT ROUTINE
            F9A6 CA           00CC   214                     WRK_L_PROMPTRTN(R10)        ;
              0C A0     7D    00CF   215             MOVQ    INT_W_PMPTLEN(R0),-         ;GET PROMPT STRING
            F99E CA           00D2   216                     WRK_W_PMPTLEN(R10)          ;
                 0D     12    00D5   217             BNEQ    70$                         ;SKIP IF PRESENT
  51     FF25 CF        9E    00D7   218             MOVAB   DEFAULT_PROMPT,R1           ;GET ADDRESS OF ASCIC DEFAULT PROMPT
         50      81     9A    00DC   219             MOVZBL  (R1)+,R0                    ;GET LENGTH OF PROMPT
  F99E CA        50     7D    00DF   220             MOVQ    R0,WRK_W_PMPTLEN(R10)       ;GET DEFAULT PROMPT STRING
                              00E4   221
                              00E4   222 ;
```

```
                      00E4   223 ; IF COMMAND IS MISSING, THEN PROMPT FOR IT NOW
                      00E4   224 ;
 50   000388FA 8F  D0 00E4   225 70$:      MOVL    #CLI$_STRTOOLNG,R0           ;ASSUME THAT PROMPT IS TOO LONG
           F99E CA  B1 00EB   226           CMPW    WRK_W_PMPTLEN(R10),-         ;IS IT?
                20     00EF   227                   #ENT_K_MAX_PROMPT            ;
                63  1A 00F0   228           BGTRU   200$                         ;YES, THEN EXIT
             0C AB  D5 00F2   229           TSTL    INT_L_ENTADDR(R11)           ;IS COMMAND PRESENT?
                1A  12 00F5   230           BNEQ    75$                          ;YES, THEN SKIP
 50        F9AA CA  D0 00F7   231           MOVL    WRK_L_READRTN(R10),R0        ;GET PROMPT ROUTINE
 51        F99E CA  9E 00FC   232           MOVAB   WRK_W_PMPTLEN(R10),R1        ;GET PROMPT STRING
              011B  30 0101   233           BSBW    DCL$USER_INPUT               ;GET THE COMMAND LINE
                      0104   234
                      0104   235 ;
                      0104   236 ; IF EOF WAS FOUND, THEN RETURN THAT STATUS.
                      0104   237 ;
 50   00000000'8F  D1 0104   238           CMPL    #RMS$_EOF,R0                 ;END OF INPUT?
                24  12 010B   239           BNEQ    80$                          ;NO, START PROCESSING THE COMMAND
             FEF0'  30 010D   240           BSBW    DCL$GENEOL                   ;GENERATE EOL DESCRIPTOR
                    04 0110   241           RET                                  ;EXIT
                      0111   242
                      0111   243 ;
                      0111   244 ; COPY USER SUPPLIED INPUT STRING INTO SCRATCH AREA
                      0111   245 ;
    50       0C AB  D0 0111   246 75$:      MOVL    INT_L_ENTADDR(R11),R0        ;GET ADDRESS OF COMMAND DESCRIPTOR
           0000'C0  B1 0115   247           CMPW    DSC$W_LENGTH(R0),-           ;CHECK IF TOO BIG FOR INPUT BUFFER
           0100 8F     0119   248                   #WRK_C_INPBUFSIZ             ;
                27  1A 011C   249           BGTRU   180$                         ;BRANCH IF STRING IS TOO BIG
           F895 CA  9E 011E   250           MOVAB   WRK_G_INPBUF-1(R10),-        ;SET INPUT STRING POINTER
           F48E CA     0122   251                   WRK_L_CHARPTR(R10)           ;
           0000'C0  28 0125   252           MOVC    DSC$W_LENGTH(R0),-           ;COPY STRING INTO INPUT BUFFER
           0000'D0     0129   253                   @DSC$A_POINTER(R0),-         ;
           F896 CA     012C   254                   WRK_G_INPBUF(R10)            ;
                63  94 012F   255           CLRB    (R3)                         ;PUT NULL STOPPER AS END-OF-LINE
                      0131   256
                      0131   257 ;
                      0131   258 ; GET FIRST TOKEN FROM COMMAND LINE
                      0131   259 ;
             FECC'  30 0131   260 80$:      BSBW    DCL$MARK                     ;MARK CURRENT PARSE POSITION
             FEC9'  30 0134   261           BSBW    DCL$GETOKEN                  ;GET COMMAND VERB
                15  13 0137   262           BEQL    190$                         ;IF NONE, RETURN ERROR
    58       04 AB  D0 0139   263           MOVL    INT_L_TABLES(R11),R8         ;GET ADDRESS OF COMMAND TABLES
             FEC0'  30 013D   264           BSBW    DCL$SEARCH_VERB              ;SEARCH VERB TABLE FOR VERB
             12 50  E9 0140   265           BLBC    R0,200$                      ;BRANCH IF ERROR
                15  11 0143   266           BRB     PARSE_VERB_QUALS
                      0145   267
                      0145   268 180$:     STATUS  BUFOVF                       ;INPUT STRING IS TOO BIG FOR BUFFER
                07  11 014C   269           BRB     200$
                      014E   270
                      014E   271 190$:     STATUS  NOCOMD                       ;SET NO COMMAND STATUS
             FEA8'  30 0155   272 200$:     BSBW    DCL$GENEOL                   ;GENERATE EOL DESCRIPTOR
                17  11 0158   273           BRB     EXIT                         ;EXIT WITH ERROR
                      015A   274
                      015A   275 ;
                      015A   276 ; PROCESS COMMAND QUALIFIERS AND PARAMETERS
                      015A   277 ;
                      015A   278 PARSE_VERB_QUALS:
             FEA3'  30 015A   279           BSBW    DCL$PARSE_COMMAND            ;PARSE THE REST OF THE COMMAND
```

```
000380B0 8F    50   D1  015D   280              CMPL    R0,#CLI$_NOCOMD           ;IF NOT CTRLZ-ED
               01   12  0164   281              BNEQ    10$                       ;THEN CHECK FOR ERRORS
                    04  0166   282              RET                               ;ELSE RETURN NO COMMAND STATUS
          07   50   E9  0167   283 10$:         BLBC    R0,EXIT                   ;SIGNAL ANY ERRORS
                        016A   284
                        016A   285 NORMAL_EXIT:
                        016A   286              STATUS  NORMAL                    ;SET NORMAL STATUS
                        0171   287
                        0171   288 ;
                        0171   289 ; SIGNAL ALL ERRORS.
                        0171   290 ;
          02   50   E8  0171   291 EXIT:        BLBS    R0,90$
               0B   10  0174   292              BSBB    ERRORMSG
                    04  0176   293 90$:         RET
                        0177   294
                        0177   295 ;
                        0177   296 ; HANDLE ERRORS DETECTED BY THE CHARACTER INPUT ROUTINES
                        0177   297 ;
               50   DD  0177   298 ERROR:       PUSHL   R0                        ;SAVE ERROR/STATUS VALUE
00000000'GF    01   FB  0179   299              CALLS   #1,G^LIB$SIGNAL           ;SIGNAL THE ERROR
                    04  0180   300              RET                               ;RETURN TO CALLER
```

```
                       0181         .SBTTL  SIGNAL ERROR MESSAGE
                       0181     ;+
                       0181     ; ERRORMSG - SIGNAL ERROR MESSAGE
                       0181     ;
                       0181     ; THIS ROUTINE IS CALLED TO SIGNAL AN ERROR MESSAGE AND DISPLAY THE SEGMENT
                       0181     ; OF THE COMMAND LINE THAT IS IN ERROR.
                       0181     ;
                       0181     ; INPUTS:
                       0181     ;
                       0181     ;       R0 = ERROR NUMBER.
                       0181     ;       WRK_L_MARKPTR = ADDRESS OF START OF TOKEN IN EXPANSION BUFFER.
                       0181     ;       WRK_L_EXPANDPTR = ADDRESS OF NEXT BYTE IN EXPANSION BUFFER.
                       0181     ;       R10 = BASE ADDRESS OF COMMAND WORK AREA.
                       0181     ;       R11 = BASE ADDRESS OF PROCESS WORK AREA.
                       0181     ;
                       0181     ; OUTPUTS:
                       0181     ;
                       0181     ;       THE APPROPRIATE ERROR MESSAGE IS DISPLAYED ALONG WITH THE SEGMENT OF
                       0181     ;       THE COMMAND LINE IN ERROR.
                       0181     ;
                       0181     ;       R0 IS PRESERVED ACROSS CALL.
                       0181     ;-
                       0181
                       0181     ERRORMSG:                               ;OUTPUT ERROR MESSAGE
            3F    BB   0181             PUSHR   #^M<R0,R1,R2,R3,R4,R5>  ;SAVE REGISTERS
                       0183
                       0183     ;
                       0183     ; Check if message should be suppressed.
                       0183     ;
000380B0 8F   50  D1   0183             CMPL    R0,#CLI$_NOCOMD         ;IS IT NOCOMD STATUS?
              3B  13   018A             BEQL    60$                     ;YES, DO NOT SIGNAL
      37 50   1C  E0   018C             BBS     #STS$V_INHIB_MSG,R0,60$ ;BR IF NO MESSAGE DESIRED
                       0190
                       0190     ;
                       0190     ; Check if offending text should be output as part of this error message.
                       0190     ;
         55   02  D0   0190             MOVL    #2,R5                           ;ASSUME NO COMMAND SET WILL BE OUTPUT
              54  D4   0193             CLRL    R4                              ;SET STACK USAGE
              01  E0   0195             BBS     #WRK_V_COMMAND,-                ;DO NOT OUTPUT IF COMMAND IN EXECUTION
      22 F0 AA         0197                     WRK_W_FLAGS(R10),40$            ;
           FE63'  30   019A             BSBW    DCL$MARKEDTOKEN                 ;GET DESCRIPTOR OF CURRENT PARSE STRING
              62  95   019D             TSTB    (R2)                            ;DOES TOKEN START WITH EOL CHAR?
              1B  13   019F             BEQL    40$                             ;IF SO, ASSUME AT EOL AND SKIP TEXT
              51  D5   01A1             TSTL    R1                              ;WILL ANY TOKEN BE SHOWN?
              17  13   01A3             BEQL    40$                             ;IF NOT, SKIP TEXT
                       01A5
                       01A5     ;
                       01A5     ; Build the command line part of the message argument vector.
                       01A5     ;
         7E   51  7D   01A5     30$:    MOVQ    R1,-(SP)                        ;PUSH SEGMENT DESCRIPTOR ON STACK
              5E  DD   01A8             PUSHL   SP                              ;PUSH ADDRESS OF SEGMENT DESCRIPTOR
         7E   11  B0   01AA             MOVW    #^X0011,-(SP)                   ;ONLY OUTPUT THE TEXT PART
         7E   01  B0   01AD             MOVW    #1,-(SP)                        ;ONE FAO ARGUMENT
   00038248   8F  DD   01B0             PUSHL   #CLI$_CMDSEG                    ;PUSH MESSAGE CODE
         55   05  D0   01B6             MOVL    #5,R5                           ;SET ARGUMENT COUNT
         54   08  D0   01B9             MOVL    #2*4,R4                         ;SET STACK USAGE
                       01BC
```

```
                          01BC      ;
                          01BC      ; Build the status part of the message argument vector.
                          01BC      ;
               00    DD   01BC      40$:     PUSHL    #0                          ;SET FAO COUNT
               50    DD   01BE               PUSHL    R0                          ;SET STATUS CODE
  00000000'GF  55    FB   01C0               CALLS    R5,G^LIB$SIGNAL             ;SIGNAL THE ERROR
           5E  54    C0   01C7      60$:     ADDL     R4,SP                       ;POP EVERYTHING UP TO BUFFER AND DESC.
               3F    BA   01CA      70$:     POPR     #^M<R0,R1,R2,R3,R4,R5>      ;RESTORE REGISTERS
               05         01CC               RSB                                  ;
```

```
                        01CD   369          .SBTTL  RESTORE SUPERVISOR MODE DATA STRUCTURES
                        01CD   370 ;+
                        01CD   371 ; RESTORE_SUPER_MODE - RESTORE SUPERVISOR MODE DATA STRUCTURES
                        01CD   372 ;
                        01CD   373 ; CAUSE ALL SUBSEQUENT INTERFACE REQUESTS TO REFER TO THE ALREADY
                        01CD   374 ; PARSED ORIGINAL COMMAND LINE.  THIS IS DONE BY DEALLOCATING THE
                        01CD   375 ; USER MODE WRK BLOCK, DEALLOCATING THE CLINT OWN STORAGE, AND ZEROING
                        01CD   376 ; THE POINTERS TO BOTH OF THESE AREAS, CAUSING THE INTERFACE ROUTINES
                        01CD   377 ; TO BE REINITIALIZED WITH THE THE SUPERVISOR MODE WRK BLOCK.
                        01CD   378 ;
                        01CD   379 ;        R2 =     ADDRESS OF CURRENT WRK DATA STRUCTURE
                        01CD   380 ;
                        01CD   381 ;-
                        01CD   382
                        01CD   383 RESTORE_SUPER_MODE:
          5A    62  D0  01CD   384          MOVL    (R2),R10                ;WRK BLOCK ALLOCATED?
                03  13  01D0   385          BEQL    5$                      ;NO, THEN BRANCH
              0016  30  01D2   386          BSBW    DEALLOC_WRK             ;YES, DEALLOCATE THE WRK BLOCK
                        01D5   387
                        01D5   388 ;
                        01D5   389 ; IF CLINT OWN STORAGE IS ALLOCATED, THEN FREE IT SO THAT SUBSEQUENT
                        01D5   390 ; INTERFACE REQUESTS CAUSE THE OWN STORAGE TO BE REINITIALIZED.
                        01D5   391 ;
   52  00000000'GF  DE  01D5   392 5$:      MOVAL   G^CTL$GL_CLINTOWN,R2    ;GET ADDRESS OF CLINT OWN POINTER
                62  D5  01DC   393          TSTL    (R2)                    ;CLINT OWN STORAGE ALLOCATED?
                03  13  01DE   394          BEQL    10$                     ;NO, THEN BRANCH
              0027  30  01E0   395          BSBW    DEALLOC_OWN             ;DEALLOCATE OWN STORAGE
                        01E3   396 10$:     STATUS  NORMAL                  ;RETURN SUCCESSFUL
                    04  01EA   397          RET
```

```
                        01EB              .SBTTL  DEALLOCATE USER MODE WRK DATA STRUCTURE
                        01EB      ;+
                        01EB      ; DEALLOC_WRK - DEALLOCATE USER MODE WRK DATA STRUCTURE
                        01EB      ;
                        01EB      ; DEALLOCATE USER MODE WRK BLOCK.  IF SUPERVISOR MODE, THEN JUST ZERO
                        01EB      ; THE POINTER.
                        01EB      ;
                        01EB      ;       R2 =                    ADDRESS OF CTL$GL_DCLPRSOWN
                        01EB      ;       R10 =                   ADDRESS OF WRK BLOCK
                        01EB      ;       INT_L_FREEVM(R11) =     ADDRESS OF LIBSFREE_VM ROUTINE
                        01EB      ;
                        01EB      ;-
                        01EB
                        01EB      DEALLOC_WRK:
              03   0D   01EB              PROBEW  #PSL$C_USER,-           ;USER WRITABLE?
         0B7A 8F        01ED                      #-WRK_K_LENGTH,-        ;
         F486 CA        01F0                      WRK_K_LENGTH(R10)       ;
              12   13   01F3              BEQL    10$                     ;NO, THEN BRANCH
                        01F5                                              ;YES, THEN DEALLOCATE
     00000B7A 8F   DD   01F5              PUSHL   #-WRK_K_LENGTH          ;LENGTH OF LOCAL WRK BLOCK
              52   DD   01FB              PUSHL   R2                      ;ADDRESS OF LONGWORD CONTAINING ADDRESS
           04 AE   DF   01FD              PUSHAL  4(SP)                   ;ADDRESS OF WORD CONTAINING LENGTH
      14 BB   02   FB   0200              CALLS   #2,@INT_L_FREEVM(R11)   ;DEALLOCATE WRK BLOCK
         5E   04   C0   0204              ADDL    #4,SP                   ;RESTORE THE STACK
              62   D4   0207      10$:    CLRL    (R2)                    ;INDICATE BLOCK NO LONGER EXISTS
                   05   0209              RSB
```

```
                        020A            .SBTTL  DEALLOCATE CLINT OWN STORAGE
                        020A    ;+
                        020A    ; DEALLOC_OWN - DEALLOCATE CLINT OWN STORAGE
                        020A    ;
                        020A    ; DEALLOCATE CLINT OWN STORAGE.
                        020A    ;
                        020A    ;       R2 =                    ADDRESS OF CLINT OWN STORAGE
                        020A    ;       INT_L_FREEVM(R11) =     ADDRESS OF LIBSFREE_VM ROUTINE
                        020A    ;
                        020A    ;-
                        020A
                        020A    DEALLOC_OWN:
00000090 8F     DD      020A            PUSHL   #DCL_C_SIZE                     ;LENGTH OF CLINT OWN STORAGE
         52     DD      0210            PUSHL   R2                              ;ADDRESS OF LONGWORD CONTAINING ADDRESS
      04 AE     DF      0212            PUSHAL  4(SP)                           ;ADDRESS OF WORD CONTAINING LENGTH
   14 BB 02     FB      0215            CALLS   #2,@INT_L_FREEVM(R11)           ;DEALLOCATE CLINT OWN STORAGE
      5E 04     C0      0219            ADDL    #4,SP                           ;RESTORE THE STACK
         62     D4      021C            CLRL    (R2)                            ;INDICATE STORAGE NO LONGER EXISTS
                05      021E            RSB
```

```
                 021F    446            .SBTTL  GET INPUT FROM THE USER
                 021F    447    ;+
                 021F    448    ; DCL$USER_INPUT - GET INPUT FROM THE USER
                 021F    449    ;
                 021F    450    ; THIS ROUTINE CALLS A USER-SUPPLIED INPUT ROUTINE WITH A PROMPT TO GET
                 021F    451    ; ADDITIONAL COMMAND INFORMATION FROM THE USER.
                 021F    452    ;
                 021F    453    ; THE FORMAT OF THE CALL IS:
                 021F    454    ;
                 021F    455    ;       P1 =    ADDRESS OF RETURN DESCRIPTOR
                 021F    456    ;       P2 =    ADDRESS OF PROMPT DESCRIPTOR
                 021F    457    ;       P3 =    ADDRESS OF WORD TO RECEIVE THE RETURN LENGTH
                 021F    458    ;
                 021F    459    ; INPUTS:
                 021F    460    ;
                 021F    461    ;       R0 =    ADDRESS OF USER INPUT ROUTINE
                 021F    462    ;       R1 =    ADDRESS OF PROMPT STRING DESCRIPTOR
                 021F    463    ;       R10 =   ADDRESS OF COMMAND DATA STRUCTURE
                 021F    464    ;
                 021F    465    ; OUTPUTS:
                 021F    466    ;
                 021F    467    ;       R0 =    STATUS OF THE READ
                 021F    468    ;-
                 021F    469
                 021F    470    DCL$USER_INPUT::
   7E   54   7D  021F    471            MOVQ    R4,-(SP)                ;SAVE R4 AND R5
   7E   52   7D  0222    472            MOVQ    R2,-(SP)                ;SAVE R2 AND R3
   5E   21   C2  0225    473            SUBL    #ENT_K_MAX_PROMPT+1,SP  ;ALLOCATE PROMPT BUFFER
   55   50   D0  0228    474            MOVL    R0,R5                   ;SAVE ROUTINE ADDR
                 022B    475
                 022B    476    ;
                 022B    477    ; IF A PROMPT WAS SUPPLIED, THEN PUSH ITS DESCRIPTOR ON THE STACK.
                 022B    478    ;
        51   D5  022B    479            TSTL    R1                      ;WAS A PROMPT SUPPLIED?
        05   13  022D    480            BEQL    10$                     ;NO, THEN CREATE ONE
   7E   61   7D  022F    481            MOVQ    (R1),-(SP)              ;PUSH DESCRIPTOR OF PROMPT STRING
        1C   11  0232    482            BRB     20$                     ;ISSUE THE PROMPT
                 0234    483
                 0234    484    ;
                 0234    485    ; IF NO PROMPT WAS SUPPLIED, THEN BUILD A CONTINUATION PROMPT ON THE STACK.
                 0234    486    ;
6E   5F 8F   90  0234    487    10$:    MOVB    #^A/_/,(SP)             ;INSERT AN UNDERSCORE
        5E   DD  0238    488            PUSHL   SP                      ;PUSH PROMPT BUFFER ADDRESS
   7E   01   D0  023A    489            MOVL    #1,-(SP)                ;INIT PROMPT LENGTH
6E F99E CA   A0  023D    490            ADDW    WRK_W_PMPTLEN(R10),(SP) ;SET PROMPT BUFFER LENGTH
        55   DD  0242    491            PUSHL   R5                      ;SAVE ROUTINE ADDRESS
   F99E CA   28  0244    492            MOVC3   WRK_W_PMPTLEN(R10),-    ;COPY IT INTO THE PROMPT BUFFER
   F9A2 DA       0248    493                    @WRK_L_PMPTADDR(R10),-  ;
     0D AE       024B    494                    13(SP)                  ;
     55 8ED0     024D    495            POPL    R5                      ;RESTORE ROUTINE ADDRESS
                 0250    496
                 0250    497    ;
                 0250    498    ; SET UP PROMPT PARAMETERS AND THEN ISSUE THE PROMPT.
                 0250    499    ;
   F894 CA   9E  0250    500    20$:    MOVAB   WRK_G_INPBUF-2(R10),-   ;GET ADDRESS OF INPUT STRING
        52       0254    501                    R2                      ;
     FF A2   9E  0255    502            MOVAB   -1(R2),-                ;RESET THE CHARACTER POINTER
```

```
              F48E CA        0258   503                     WRK_L_CHARPTR(R10)              ;
                 52    DD    025B   504             PUSHL   R2                              ;PUSH ADDRESS OF INPUT BUFFER
        7E  0100 8F    3C    025D   505             MOVZWL  #WRK_C_INPBUFSIZ,-(SP)          ;PUSH SIZE OF INPUT BUFFER
                             0262   506
                 6E    DF    0262   507             PUSHAL  (SP)                            ;PUSH ADDRESS OF RETURN LENGTH
              0C AE    DF    0264   508             PUSHAL  12(SP)                          ;PUSH ADDRESS OF PROMPT STRING DESC
              08 AE    DF    0267   509             PUSHAL  8(SP)                           ;PUSH ADDRESS OF RETURN DESC
              65  03   FB    026A   510             CALLS   #3,(R5)                         ;GET THE INPUT
                  53 8ED0    026D   511             POPL    R3                              ;GET INPUT SIZE
                  52 8ED0    0270   512             POPL    R2                              ;GET INPUT ADDRESS
              16  50   E9    0273   513             BLBC    R0,90$                          ;SIGNAL ANY ERROR
                             0276   514
                             0276   515 ;
                             0276   516 ; INSERT AN EOL MARKER
                             0276   517 ;
               6243    94    0276   518             CLRB    (R2)[R3]                        ;INSERT EOL CHARACTER
                             0279   519
                             0279   520 ;
                             0279   521 ; IF THE RECORD IS A FULL LINE COMMENT, REPROMPT NOW
                             0279   522 ;
              62  21   91    0279   523             CMPB    #^A/!/,(R2)                     ;IS FIRST CHAR AN EXCLAMATION MARK?
                  D2   13    027C   524             BEQL    20$                             ;REPROMPT IF SO
                             027E   525
                             027E   526 ;
                             027E   527 ; IF THE PREVIOUS RECORD ENDED WITH TRAILING SPACES OR TABS,
                             027E   528 ; INSERT A SPACE AT THE FRONT OF THE CURRENT INPUT RECORD SO
                             027E   529 ; THAT PARAMETERS ARE DELIMITED PROPERLY.
                             027E   530 ;
                  09   E5    027E   531             BBCC    #WRK_V_TRAILSPC,-               ;IF CLR, NO TRAILING SPACE SEEN
           06 F0  AA         0280   532                     WRK_W_FLAGS(R10),80$            ;
              50  20   90    0283   533             MOVB    #^A/ /,R0                       ;SET SPACE CHARACTER
              FD77'    30    0286   534             BSBW    DCL$BACKUPCHAR                  ;APPEND TO FRONT OF INPUT BUFFER
                             0289   535
                             0289   536 ;
                             0289   537 ; EXIT FROM INPUT ROUTINE
                             0289   538 ;
              50  01   D0    0289   539 80$:        MOVL    #1,R0                           ;RETURN SUCCESS
              5E  29   C0    028C   540 90$:        ADDL    #ENT_K_MAX_PROMPT+1+8,SP;RESTORE THE STACK
              52  8E   7D    028F   541             MOVQ    (SP)+,R2                        ;RESTORE REGISTERS
              54  8E   7D    0292   542             MOVQ    (SP)+,R4                        ;
           0B 50   E8        0295   543             BLBS    R0,100$                         ;SKIP IF SUCCESS
     0000'8F      50   B1    0298   544             CMPW    R0,#RMS$_EOF&^XFFFF             ;EOF STATUS?
                  05   13    029D   545             BEQL    110$                            ;YES, RETURN GENERIC EOF
           F9AE DA     16    029F   546             JSB     @WRK_L_ERRORRTN(R10)            ;CALL ERROR HANDLER
                       05    02A3   547 100$:       RSB
                             02A4   548
   50    00000000'8F   D0    02A4   549 110$:       MOVL    #RMS$_EOF,R0                    ;RETURN GENERIC EOF
                       05    02AB   550             RSB
                             02AC   551
                             02AC   552             .END
```

```
CDU$UPGRADE_TABLE           *********     X  02    WRK_B_MINPARM                 FFFFFFD1
CLI$_BUFOVF               = 00038018                WRK_B_PARMCNT                 FFFFFFCE
CLI$_CMDSEG               = 00038248                WRK_B_PARMSUM                 FFFFFFCF
CLI$_NOCOMD               = 000380B0                WRK_B_RECALLCNT               FFFFFFC5
CLI$_NORMAL               = 00030001                WRK_B_VALLEV                  FFFFFFC4
CLI$_STRTOOLNG            = 000388FA                WRK_B_VERBTYP                 FFFFFFC2
CTL$GL_CLINTOWN             *********     X  02    WRK_C_INPBUFSIZ             = 00000100
CTL$GL_DCLPRSOWN            *********     X  02    WRK_C_LENGTH                  FFFFF486
CTRLZ                     = 0000001A                WRK_G_BUFFER                  FFFFF492
DCL$BACKUPCHAR              *********     X  02    WRK_G_INPBUF                  FFFFF896
DCL$DCLPARSE                0000000A RG      02    WRK_G_RESULT                  FFFFF9B6
DCL$GENEOL                  *********     X  02    WRK_K_LENGTH                  FFFFF486
DCL$GETOKEN                 *********     X  02    WRK_L_CHARPTR                 FFFFF48E
DCL$MARK                    *********     X  02    WRK_L_DISALLOW                FFFFFFE6
DCL$MARKEDTOKEN             *********     X  02    WRK_L_ERRORRTN                FFFFF9AE
DCL$PARSE_COMMAND           *********     X  02    WRK_L_EXPANDPTR               FFFFF486
DCL$SEARCH_VERB             *********     X  02    WRK_L_IMAGE                   FFFFFFE2
DCL$USER_INPUT              0000021F RG      02    WRK_L_MARKPTR                 FFFFF48A
DCL_B_FLAGS                 0000008C                WRK_L_PAROUT                  FFFFFFD2
DCL_B_PARAM                 0000008F                WRK_L_PMPTADDR                FFFFF9A2
DCL_C_SIZE                  00000090                WRK_L_PROMPTRTN               FFFFF9A6
DCL_K_SIZE                  00000090                WRK_L_PROPTR                  FFFFFFC6
DCL_L_DEFADDR               00000088                WRK_L_QUABLK                  FFFFFFCA
DCL_L_ENTITY                00000040                WRK_L_READRTN                 FFFFF9AA
DCL_L_FREEVM                00000080                WRK_L_RECALLPTR               FFFFFFEA
DCL_L_GETVM                 0000007C                WRK_L_RSLEND                  FFFFFFB6
DCL_L_PRMLIM                00000000                WRK_L_RSLNXT                  FFFFFFBA
DCL_L_QUAL                  00000078                WRK_L_SAVAP                   FFFFFFF8
DCL_L_TOKEN                 0000005C                WRK_L_SAVFP                   FFFFFFFC
DCL_W_BUFLEN                0000008D                WRK_L_SAVSP                   FFFFFFF4
DCL_W_DEFLEN                00000084                WRK_L_SIGNALRTN               FFFFFFD6
DEALLOC_OWN                 0000020A R       02    WRK_L_SPECRTN                 FFFFF9B2
DEALLOC_WRK                 000001EB R       02    WRK_L_TAB_VEC                 FFFFFFDE
DEFAULT_PROMPT              00000000 R       02    WRK_L_VERB                    FFFFFFBE
DSC$A_POINTER               *********     X  02    WRK_M_USRMODE               = 00002000
DSC$W_LENGTH                *********     X  02    WRK_V_COMMAND               = 00000001
ENT_K_MAX_PROMPT          = 00000020                WRK_V_TRAILSPC              = 00000009
ERROR                       00000177 R       02    WRK_W_FLAGS                   FFFFFFF0
ERRORMSG                    00000181 R       02    WRK_W_FLAGS2                  FFFFFFF2
EXIT                        00000171 R       02    WRK_W_IMGCHAN                 FFFFFFEE
INT_L_CONTINRTN           = 00000008                WRK_W_PMPTLEN                 FFFFF99E
INT_L_ENTADDR             = 0000000C
INT_L_FREEVM              = 00000014
INT_L_GETVM               = 00000010
INT_L_LIST                = 00000018
INT_L_PROMPTRTN           = 00000004
INT_L_TABLES              = 00000004
INT_W_PMPTLEN             = 0000000C
LIB$SIGNAL                  *********     X  02
NORMAL_EXIT                 0000016A R       02
PARSE_VERB_QUALS            0000015A R       02
PSL$C_USER                = 00000003
RESTORE_SUPER_MODE          000001CD R       02
RMS$_EOF                    *********     X  02
STS$V_INHIB_MSG           = 0000001C
WRK_B_CMDOPT                FFFFFFC3
WRK_B_MAXPARM               FFFFFFD0
```

```
                                                +----------------+
                                                ! Psect synopsis !
                                                +----------------+

PSECT name                      Allocation         PSECT No.  Attributes
----------                      ----------         ---------  ----------
.  ABS  .                       00000000  (    0.) 00 (   0.)  NOPIC   USR   CON   ABS   LCL NOSHR NOEXE NORD  NOWRT NOVEC BYTE
$ABS$                           FFFFFFFC  (    0.) 01 (   1.)  NOPIC   USR   CON   ABS   LCL NOSHR   EXE   RD    WRT NOVEC BYTE
DCL$ZCODE                       000002AC  (  684.) 02 (   2.)  NOPIC   USR   CON   REL   LCL NOSHR   EXE   RD  NOWRT NOVEC BYTE

                                             +--------------------------+
                                             ! Performance indicators !
                                             +--------------------------+

Phase                    Page faults    CPU Time       Elapsed Time
-----                    -----------    --------       ------------
Initialization                    15    00:00:00.05    00:00:02.30
Command processing                96    00:00:00.67    00:00:09.82
Pass 1                           285    00:00:10.06    00:00:28.80
Symbol table sort                  0    00:00:01.43    00:00:02.25
Pass 2                           118    00:00:02.04    00:00:06.73
Symbol table output               11    00:00:00.11    00:00:00.57
Psect synopsis output              2    00:00:00.03    00:00:00.03
Cross-reference output             0    00:00:00.00    00:00:00.00
Assembler run totals             527    00:00:14.40    00:00:50.51

The working set limit was 1200 pages.
53043 bytes (104 pages) of virtual memory were used to buffer the intermediate code.
There were 50 pages of symbol table space allocated to hold 950 non-local and 28 local symbols.
552 source lines were read in Pass 1, producing 18 object records in Pass 2.
24 pages of virtual memory were used to define 18 macros.

                                            +----------------------------+
                                            ! Macro library statistics !
                                            +----------------------------+

Macro library name                           Macros defined
------------------                           --------------
_$255$DUA28:[SYSLIB]SYSBLDMLB.MLB;1                     0
_$255$DUA28:[DCL.OBJ]DCL.MLB;1                          7
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                          0
_$255$DUA28:[SYSLIB]STARLET.MLB;2                       6
TOTALS (all libraries)                                 13

1047 GETS were required to define 13 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:DCLPARSE/OBJ=OBJ$:DCLPARSE MSRC$:DCLPARSE/UPDATE=(ENH$:DCLPARSE)+EXECML$/LIB+LIB$:DCL/LIB+SYS$LIBRARY:SYSBLDMLB/LIB
```

0069 AH-BT13A-SE
VAX/VMS V4.0

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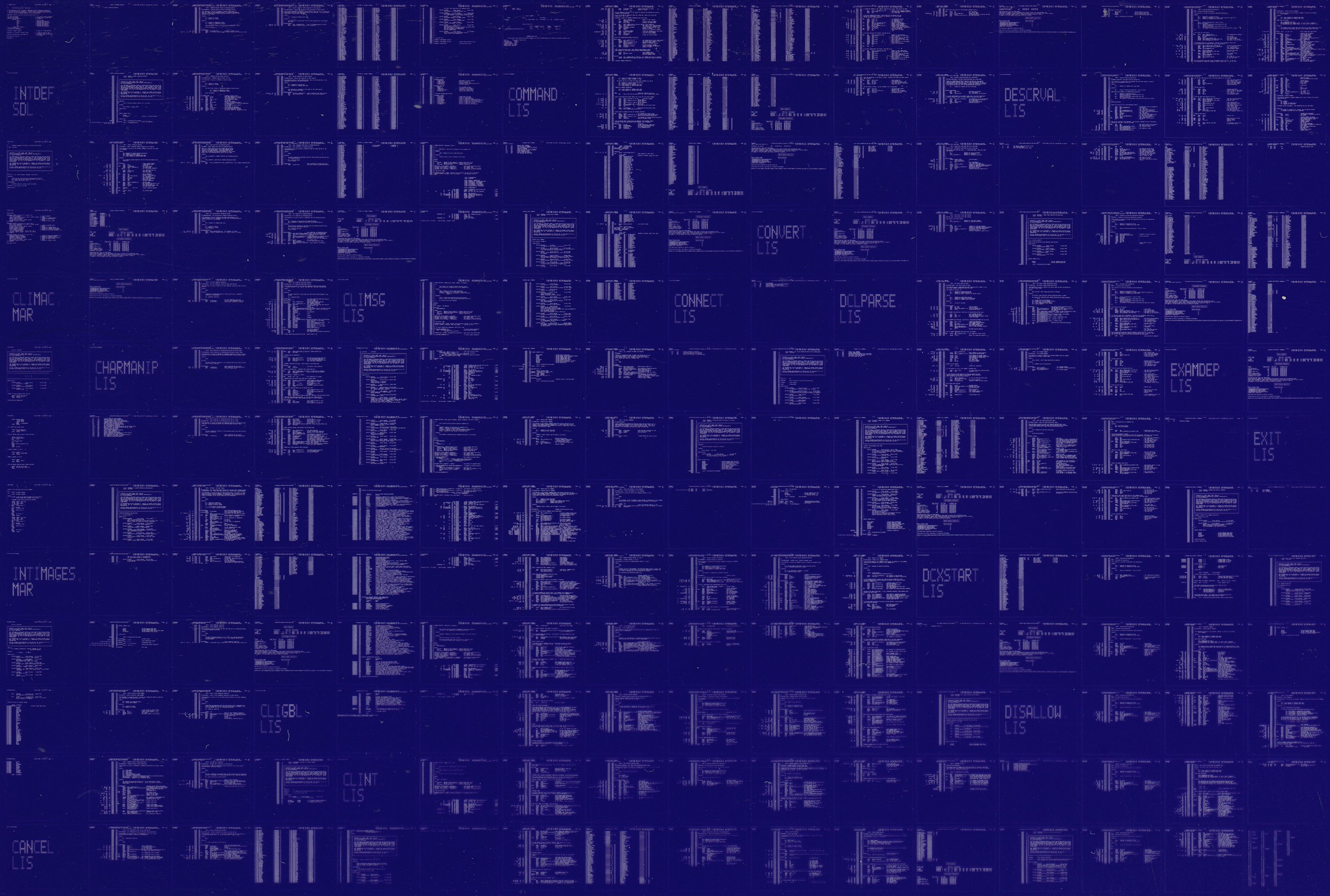

INTDEF
SDL

COMMAND
LIS

DESCRVAL
LIS

CONVERT
LIS

CLIMAC
MAR

CLIMSG
LIS

CONNECT
LIS

DCLPARSE
LIS

CHARMANIP
LIS

EXAMDEP
LIS

EXIT
LIS

INTIMAGES
MAR

DCXSTART
LIS

CLIGBL
LIS

DISALLOW
LIS

CLINT
LIS

CANCEL
LIS